Wildlife and Wildlife Habitat Mitigation Plan

Montana Hydroelectric Projects
Volume IIB - Noxon Rapids & Cabinet Gorge

639.92
U25WWH2B
1984

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U.S. Department of Energy
Bonneville Power Administration
Division of Fish & Wildlife

Montana Department of
Fish, Wildlife & Parks

June 1985

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Bonneville Power Administration
Division of Fish and Wildlife
Public Information Officer - PJ
P.O. Box 3621
Portland, OR 97208

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WILDLIFE AND WILDLIFE HABITAT MITIGATION PLAN FOR THE NOXON RAPIDS AND CABINET GORGE HYDROELECTRIC PROJECTS

April 1985

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Prepared by

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

Gael Bissell - Wildlife Biologist
Chris Yde - Wildlife Biologist
Marilyn Wood - Wildlife Biologist

Funded by

Bonneville Power Administration
Project No. 83-464

PREFACE

This document presents a preliminary mitigation and enhancement plan for the Cabinet Gorge and Noxon Rapids hydroelectric projects. It discusses options available to provide wildlife protection, mitigation and enhancement in accordance with the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (P.L. 96-501). The options focus on mitigation for wildlife and wildlife habitat losses attributable to the construction and operation of the hydroelectric projects. These losses were previously estimated from the best available information concerning the degree of negative and positive impacts to target wildlife species (Wood and Olsen 1984).

Criteria by which the mitigation alternatives were evaluated were the same as those used to assess the impacts identified in the Phase I document (Wood and Olsen 1984). They were also evaluated according to feasibility, cost effectiveness criteria established by the Montana Department of Fish, Wildlife and Parks (Appendix A) and the results of coordination with cooperating entities.

This document specifically focuses on mitigation for target species which were identified during Phase I (Wood and Olsen 1984). It was assumed mitigation and enhancement for the many other target wildlife species impacted by the hydroelectric developments will occur as secondary benefits.

The major mitigation projects described in this report entail the management and enhancement of wildlife habitat on Washington Water Power lands adjacent to the 2 reservoirs. Because the current status of these lands (leased, inundated, sold, etc.) is not presently known, it was not possible to evaluate the degree to which individual projects will achieve the objectives. The assumptions and methods by which mitigation credits will be applied are described. Presently, Washington Water Power Company is updating their land ownership and will be supplying this information to the Department (R. Woodworth 1984, pers. comm.).

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I. INTRODUCTION

The Noxon Rapids and Cabinet Gorge facilities are run-of-the river hydroelectric projects located on the lower 58 miles of the Clark Fork River, upstream from Lake Pend Oreille (Fig. 1), and operated by Washington Water Power Company (WWP).

Cabinet Gorge Dam is located approximately 9 miles from Lake Pend Oreille. The dam is located just inside the Idaho border, while the reservoir is almost entirely in Montana. Construction began in February 1951 and filling of the reservoir began in August 1952. The 3,200 acre reservoir (full pool) extends upstream to the Noxon Rapids project, a distance of 20 miles. Every 1-2 years, the reservoir is drawn down for inspection and maintenance of the dam and downstream spawning channel. A maximum drawdown of 15 feet for this purpose is possible, but a drawdown to this degree is expected to be infrequent (R. Woodworth 1985, pers. commun.).

Noxon Rapids Dam, located 20 miles upstream from the Cabinet Gorge Dam, was completed in 1959. The 38 mile long reservoir has a surface area of 7,900 acres at full pool. The present operational policy of Noxon Rapids dam is to maintain the reservoir at full pool whenever possible. If power needs require additional generation (or if required under the terms of the Northwest Power Coordination Agreement), seasonal drawdowns may occur between late winter and spring runoff. The maximum allowable drawdown is 36 feet.

The Cabinet Gorge and Noxon Rapids facilities were constructed at a time when little concern was expressed for the impacts to the wildlife resource resulting from development of hydroelectric projects. The Fish and Wildlife Coordination Act, designed to minimize or mitigate the effect of water resource development projects on the fish and wildlife resources, was ineffective until a 1958 amendment strengthened the Act. Only minimal assessments of the impacts to the wildlife resource due to the 2 projects were completed with the Noxon Rapids project receiving more consideration than the Cabinet Gorge project. In 1958, the State of Montana received $78,600 from WWP primarily as a settlement for expected fisheries impacts (Wood and Olsen 1984: Appendix F). Although this settlement took place, no mitigation efforts have been directed towards wildlife since construction of the projects.

The Northwest Power Planning Council, pursuant to the Pacific Northwest Electric Power Planning and Conservation Act of 1980 adopted the Columbia River Basin Fish and Wildlife Program. The program, with funding support from Bonneville Power Administration (BPA), provides the direction to assess, from existing data, the probable loss of wildlife and wildlife habitat at hydroelectric projects in the Columbia River Basin. It further provides, based on the impact assessment, for the development of a mitigation status report and mitigation and enhancement plans for specific projects.

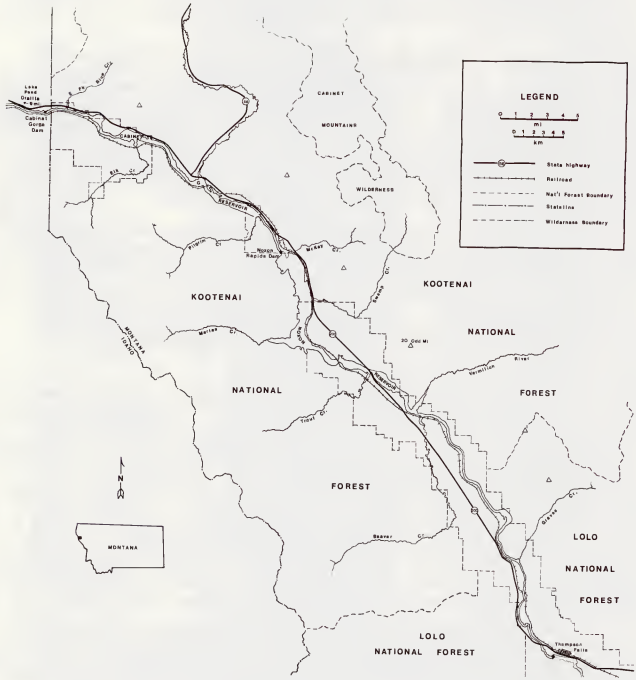

Fig. 1. Map of project area.

The Act is not clear as to which parties are responsible for funding and implementing wildlife protection, mitigation and enhancement activities for non-federal hydroelectric projects. Entities potentially contributing to funding and/or implementing this mitigation plan include WWP and BPA. Additional cooperators and contributors may be identified through future planning or negotiating processes.

In response to the Fish and Wildlife Program, an assessment of wildlife impacts and a summary of previous mitigation related to the Cabinet Gorge and Noxon Rapids projects was prepared (Wood and Olsen 1984). A target species list (Table 1) was developed to identify the primary species impacted by the projects and those of primary concern to the Montana Department of Fish, Wildlife and Parks. Acreages of the 15 principle habitat types, inundated by the reservoir, were estimated from aerial photography (Table 2) (Wood and Olsen 1984:12). For each of the target species, the area of critical habitat impacted by the respective project was determined. This allowed for the development of quantitative and qualitative estimates of the losses incurred by the target species (Table 3) (Wood and Olsen 1984:61,62). These loss estimates provided a basis to establish quantified objectives to be accomplished through a mitigation and enhancement plan for the Cabinet Gorge and Noxon Rapids hydroelectric facilities.

Table 1. List of target species impacted by Cabinet Gorge and Noxon Rapids hydroelectric projects as identified in Phase I (Wood and Olsen 1984).

Mammals

1. Big Game

White-tailed deer (Odocoileus virginianus)
Mule deer (O. hemionus)
Elk (Cervus elaphus)
Black bear (Ursus americanus)
Grizzly bear (U. arctos horribilus)
Mountain lion (Felis concolor)

2. Furbearers

Bobcat (Lynx rufus)
River otter (Lutra canadensis)
Beaver (Castor canadensis)

Birds

1. Upland Game Birds

Ruffed grouse (Bonasa umbellus)

2. Raptors

Osprey (Pandion haliaetus)
Bald eagle (Haliaectus leucocephalus)

3. Waterfowl

Canada goose (Branta canadensis)
Mallard (Anas platyrhynchos)
Common merganser (Mergus merganser)
Common goldeneye (Bucephala clangula)
Barrow's goldeneye (B. islandica)
Wood duck (Aix sponsa)

Table 2. Habitats (acres) inundated following construction of 2 hydroelectric projects on the lower Clark Fork River (Wood and Olsen 1984).

	Cabinet Gorge			Noxon Rapids		
	Lost	Created/ Enhanced	Net	Lost	Created/ Enhanced	Net
AQUATIC/WETLANDS						
River-streams	500	---	-500	1900	---	-1900
Ponds	---	87	+87	---	22	+22
Sloughs-marshes	20	117	+97	---	50	+50
TERRESTRIAL						
Cedar-hemlock	480	---	-480	200	---	-200
Douglas-fir-larch-ponderosa pine forest	---	---	---	2300	---	-2300
Mixed conifer-deciduous forest	1350	---	-1350	1300	---	-1300
Deciduous tree-shrub	330	---	-330	410	---	-410
Grassland-hay meadows	320	---	-320	1100	---	-1100
Upland shrub	---	---	---	530	---	-530
Gravel bars	170	---	-170	160	---	-160
Cliffs-eroded banks	30	---	-30	---	---	---
TOTAL	3200	240	-2996	7900	72	-7828

Table 3. Impact assessment for selected target species related to 2 hydroelectric projects on the lower Clark Fork River - Cabinet Gorge (CG) and Noxon Rapids (NR) dams.

Species/ species groups	Impacts	Qualitative estimate for both reservoirs	Quantitative estimate	
			Cabinet Gorge	Noxon Rapids
White-tailed deer	Loss of winter range	High	191-429 deer	463-1042 deer
Mule deer	Loss of spring range	Moderate	320 acres	1100 acres
Elk	Loss of spring-winter range	Low	320 acres	1100 acres
Black bear/ Grizzly bear	Loss of spring and late summer-fall foraging areas; den sites	Moderate	223 acres (spring) 330 acres (late summer-fall)	1050 acres 940 acres
Mountain lion	Loss of prey base; disruption of territories	Moderate	191-429 (white-tailed deer)	463-1042
Bobcat	Loss of prey base	Moderate	---	---
River otter	Loss of denning and resting sites	High	6-12 otters	11-23 otters
Beaver	Loss of food resources	Moderate	6-13 colonies	11-24 colonies
Bald eagle	Loss of winter habitat	Moderate	9-17 eagles	
Osprey	Increased numbers	Moderate (positive)	13 nest sites	
Ruffed grouse	Loss of yearlong habitat	High	220-420 grouse	367-701 grouse
Canada goose	Loss of nesting, loafing sites, and brood-rearing areas	Moderate	5-31 pairs	10-58 pairs
Waterfowl				
Mallard	Loss of nesting sites and brood habitat for all species	Moderate	---	---
Common merganser		Moderate	---	---
Common goldeneye		Moderate	---	---
Barrow's goldeneye		Moderate	---	---
Wood duck		Moderate	---	---

II. METHODS

A. MITIGATION OBJECTIVES

The Phase I document for the Cabinet Gorge and Noxon Rapids projects (Wood and Olsen 1984) contained: 1) an analysis of the habitats inundated by the 2 reservoirs; 2) an assessment of the impacts to selected target wildlife species; and 3) a summary of previous mitigation of the impacts to the target species. Because no previous mitigation of the impacts resulting from the construction of the 2 hydroelectric facilities has been accomplished, the impacts identified in the Phase I document (Wood and Olsen 1984) became the mitigation objectives (Table 3). One exception to this methodology was the determination of the mitigation goal for waterfowl. Because no quantitative loss estimate was made for waterfowl during Phase I, a waterfowl objective was developed to equal "prime" waterfowl habitat rather than acres of various quality habitats inundated.

To determine the mitigation goal for waterfowl, the inundated habitats known to be utilized by waterfowl were given a weighting value (2, 5 or 10) based on their importance to maintaining viable waterfowl populations (Table 4). Riverine habitats inundated by the reservoirs were not considered in this analyses for 2 reasons: 1) emphasis in the loss estimates for waterfowl was on terrestrial and/or aquatic habitats that provided foraging, nesting, and/or brood-rearing capabilities; and, 2) the trade-off between riverine habitats lost and open-water habitat gained was considered approximately equal. Summation of the weighted gain/loss estimates determined a weighted mitigation goal of 14,200 acres (Table 4). The weighted goal (14,200 acres) was then divided by 10, the "prime" wetlands weighting factor, to determine the mitigation goal of prime wetland acres (1,420 acres).

B. DEVELOPMENT OF MITIGATION PROJECT ALTERNATIVES

Recommended projects, when combined into the final mitigation plan, will essentially mitigate the impacts of the 2 hydroelectric facilities to the target species. Many criteria were considered during the development of feasible alternatives, including:

1) Responsiveness to comments received during interagency coordination;

2) Benefits to the primary target species;

3) Number of target species benefitted;

4) Benefits to non-target species;

5) Feasibility and cost effectiveness;

6) Consistency with the Fish and Wildlife Program;

Table 4. Determination of weighted mitigation goal for waterfowl habitat inundated by Cabinet Gorge and Noxon Rapids reservoirs.

	Net +Gain/(-Loss) Cabinet Gorge	Noxon Rapids	Weighting Factor	Weighted Acreage
AQUATIC/WETLANDS				
Ponds	+87	+22	10	+1090
Sloughs-marshes	+97	+50	10	+1470
TERRESTRIAL				
Mixed conifer-deciduous forest	-1350	-1300	2	-5300
Deciduous tree-shrub	-330	-410	5	-3700
Grassland-hay meadows	-320	-1100	5	-7100
Gravel bars	-170	-160	2	-660
TOTAL	-1986	-2898		-14200
OBJECTIVE[a/]				1420

a/ Total weighted acreage divided by the weighting factor of (10) for prime wetland

7) Consistency with the Montana Department of Fish, Wildlife and Parks draft mitigation policy (Appendix A); and

8) Consistency with the Montana Department of Fish, Wildlife and Parks long range planning process; and

9) Consistency with the Kootenai and Lolo National Forest plans.

Accordingly, mitigation alternatives were selected which: 1) provided opportunities to simultaneously benefit several target species; 2) accomplished mitigation in as close proximity as possible to the Cabinet Gorge and Noxon Rapids project areas; and 3) emphasized the development of long-term wildlife management agreements with other entities such as WWP or Montana Department of State Lands.

Based on the results of interagency coordination and the application of these criteria, first priority mitigation projects include those that would take place on WWP lands. These projects would benefit the primary targets species such as white-tail deer, aquatic furbearers, ruffed grouse, waterfowl, bald eagle, osprey, and a variety of non-target species. First priority projects also include obtaining long-term management agreements on National Forest Service lands adjacent to WWP lands. Because the benefits of first priority projects are not presently known, additional projects have been identified and ranked should first priority projects not meet the mitigation objectives.

Second priority projects include obtaining cooperative management agreements on Department of State Lands tracts adjacent to or near the two reservoirs, acquiring conservation easement or fee-title on nearby private lands containing key wildlife habitats (e.g. Bull River Valley). These projects also would benefit primary target species such as white-tailed deer, ruffed grouse, aquatic furbearers as well as black bear and grizzly bear.

The last priority projects include elk/mule deer winter range enhancement projects on U.S. Forest Service (Kootenai National Forest). The principal benefits of the enhancement projects would be for mule deer and elk which were low to moderately impacted.

C. MITIGATION CREDITS

To determine the extent of credit a particular mitigation project will receive, 2 consistent methods of evaluation were established. First, for those mitigation projects where long-term management agreements are made for the life of the hydroelectric project (i.e. WWP lands), credit will be given on an acre-for-acre or animal-for-animal basis. This same methodology also would be applied for state or federal lands adjacent to WWP lands which are included in long-term management agreements. Lands protected through a conservation easement or acquired by fee-title would also receive acre-for-acre and animal-for-animal credit. Full credit

would be applied to these lands because they would be protected from existing as well as future detrimental impacts (i.e. subdivisions, recreational developments, uncontrolled timber harvest).

The second approach for mitigation credit would apply only to big game habitat enhancement projects on National Forest lands. These credits would be based on the establishment of a population enhancement objective using carrying capacity. The actual degree to which carrying capacity can be increased is not known. Moreover, the potential varies by species, present land use, habitat quality and management intensity; no increases may be possible in some instances. Therefore, for the purposes of this analysis, it was assumed that: 1) it is realistically possible to increase carrying capacity for all target species by one-third (0.33); 2) present densities are similar to those estimated for the Clark Fork River valley prior to impoundment; 3) replacement animals are the difference between the present density and a density value increased by one-third (0.33); and 4) the acres required to produce complete replacement of animal losses attributable to the Cabinet Gorge and Noxon Rapids projects are calculated using the following equation:

$$X = A/C\ (0.33)$$

X = Unknown number of acres to be treated
A = Number of animals lost (target species goal)
C = Current density (animals/acre)

D. MITIGATION PLAN

The proposed mitigation projects will be combined into a long-term mitigation plan which will direct the mitigation efforts over the life of the projects. During the implementation of the mitigation plan, efforts will be made to initiate projects according to the defined prioritization. If a particular project cannot be implemented, the ranking of lower priority projects will then be evaluated for implementation.

III. RESULTS

A. DESCRIPTION AND MANAGEMENT RECOMMENDATIONS FOR WWP LANDS

1). Introduction

Based on the coordination meeting, 21 June 1984, the preferred mitigation alternative was the development of a cooperative management agreement, between WWP and Montana Department of Fish, Wildlife and Parks, for company lands adjacent to the two reservoirs. The U.S. Forest Service, Kootenai National Forest, manages lands adjacent to some of the selected parcels and should be included in the cooperative management agreement to increase the total area managed for wildlife mitigation.

The cooperative management agreement would determine the management of the selected parcels for the life of the two hydroelectric projects. The following are general habitat management objectives which should be considered for implementation on the various tracts of WWP lands:

a) Big game winter-range management/enhancement (selective timber harvest, prescribed fire, grazing management, etc);

b) Waterfowl nesting and brood-rearing habitat management/enhancement (islands/nest structures, water control structures, vegetation manipulations);

c) Schedules of repeated habitat treatments as necessary;

d) Maintenance of old growth trees for nesting, perching and roosting sites for avian species;

e) Manage/limit recreational development on the delineated wildlife management areas;

f) Limit human disturbance to key wildlife areas - i.e. heron rookeries, brood-rearing areas, etc.

g) Evaluate the status of beaver and river otter populations occupying the reservoirs and adjacent areas.

Implementation of these alternatives on WWP lands would help to insure the long-term benefits to the wildlife community utilizing the lower Clark Fork River. As other management considerations (recreation, timber management, livestock grazing, etc.) are encountered on WWP lands, the management agreement would emphasize the long-term habitat management for the benefit of the wildlife resource. Other considerations should be included only where they are not in direct conflict with the primary management objectives.

The boundaries of WWP lands were transferred from the Sanders County plat maps to U.S.G.S. (1:24,000) topographic maps. The acreage of WWP land was then estimated using planimetry. Results indicate WWP owns approximately 4,500 to 7,100 acres of land adjacent to the 2 reservoirs (Table 5). However, due to the inaccuracy of the county files in determining the current status of the lands (inundated, subdivided, sold, leased, etc.), the acreages presented in this document can only be considered rough approximations. WWP is currently conducting a project to determine the extent and status of company lands adjacent to the two reservoirs (R. Woodworth, 1984 pers. commun). When this evaluation is completed, a better estimate of the acreages available for mitigation management will be determined.

According to Sanders County files, land potentially owned by WWP include strip or border lands along the reservoir (comprising approximately 1,030 to 2,435 acres); medium-sized blocks ranging from 20-100 acres (comprising approximately 520 - 614 acres); and 9 large tracts greater than 100 acres (comprising approximately 2,950 - 3,450 acres)(Table 5).

Wildlife management objectives for these tracts depends on tract size, location, available wildlife habitat, and existing or adjacent land uses. Therefore, the recommended management objectives in the following sections should be considered preliminary and flexible. Following land status reviews and on-site inspections, specific enhancement and management techniques can be developed for the recommended objectives.

Table 5. Locations and approximate sizes of WWP lands potentially suited for wildlife mitigation as determined from Sanders County records and planimetry.[a/]

Name	Location	County Records	Planimetry (acres)
LARGE TRACTS			
1. Finley Point	23N 30W Sec. 27,34	150	100
2. Vermilion Bay	24N 31W Sec. 14,23	340	160
3. Copper Point	24N 31W Sec. 22	310	120
4. Tuscor Creek Flats	24N 32W Sec. 3,4,10,11,12		
	25N 32W Sec. 34	985	750
5. Blacktail Creek	25N 32W Sec. 3,9,15,22,27	675	400
6. Hereford Slough	26N 32W Sec. 18		
	26N 33W Sec. 13,14	715	500
7. Noxon Islands and Peninsula	26N 32W Sec. 19	125	60
8. Administrative Site	26N 32W Sec. 4,5		
	26N 32W Sec. 29,32,33	725	950
TOTAL		4025	2950
MEDIUM TRACTS			
1. Flatiron Ridge	22N 30W Sec. 26	40	80
2. Deep Creek	23N 30W Sec. 21	73	45
3. Trout Creek	24N 31W Sec. 7,8	88	88
4. Beaver Creek Strip	24N 31W Sec. 25,36	82	82
5. Tuscor Creek NE	25N 32W Sec. 35	73	30
6. McKay Creek	26N 32W Sec. 34		
	25N 32W Sec. 3	65	65
7. Bull River	26N 33W Sec. 10	45	25
8. North Elk Creek	27N 34W Sec. 36	98	70
9. South Elk Creek	27N 34W Sec. 36	50	35
TOTAL		614	520
STRIP LANDS		2435	1033
TOTAL		7074	4503

[a/] Planimetry made on U.S.G.S. topographic maps (1:24,000) after lands owned by WWP were transferred to this basemap from County records. The U.S.G.S. map showed both reservoirs to be at full pool.

2) Finley Point

Description. Washington Water Power Company owns approximately 100 - 150 acres of land adjacent to an isolated tract of U.S. Forest Service, Lolo National Forest land. A primary use of Finley Point is recreation; a boat access and picnic/camping area have been developed along the western portion of the point. The remainder of the point is available for habitat enhancement with a diversity of habitats (mixed conifer forest, spring and backwater slough, grassland meadow and gravel bars) available to the resident wildlife community.

The mixture of habitat types makes this site a preferred area for many of the target species. White-tailed deer occupy the area year-round, with winter concentrations noted. Additionally, elk use the point in late spring as a parturition area. The large spring-fed backwater slough provides habitat requirements for many waterfowl species, aquatic furbearers and non-target species. The grassland meadow provides a grazing area for deer and elk, particularly in the spring. Canada geese also forage in the meadow and loaf along the shoreline and gravel bars.

Recommended Management. Primary management on Finley Point should focus on protecting and managing the grassland meadow, slough and shoreline area for wildlife. A cooperative management agreement should be made with the Lolo National Forest for inclusion of their property into the wildlife management plan. Suggested habitat enhancement techniques for deer and elk include burning or mowing the meadow to increase forage production, reduce noxious weeds, and remove encroaching conifers. Additionally, portions of the meadow could be cultivated and replanted to desirable forage species.

To enhance the shoreline and meadow for Canada geese, nest structures could be built. In addition, portions of the meadow along the shoreline could be enhanced for Canada goose brood-rearing through various vegetation manipulations.

Because a portion of Finley Point has been developed for recreation, it is recommended that enhancement and management efforts take place apart from heavily used recreation sites. In addition, those areas enhanced for Canada goose nesting or brood-rearing should be closed for recreational activities during the spring-early summer seasons.

A management plan for Finley Point should include scheduled repeated treatments of enhanced areas. Specific plans and schedules would be developed through interagency coordination and on-site inspection and after land ownerships are determined.

Species Benefitted. Enhancement and protection of the grassland meadow, slough and shoreline areas will provide mitigation for waterfowl, aquatic furbearers, white-tailed deer,

elk and possibly bobcat. Full credit will be given to these species (groups) for the acreage included in a long-term habitat management plan for those species benefitted. Credit for mountain lion would be given on the basis of big game benefits.

3) Vermilion Bay

Description. Vermilion Bay includes WWP lands along the mouth of the Vermilion River (approximately 100 acres) and on the north side of Vermilion Bay (approximately 80 acres). The lands along the river bottom and bay contain deciduous tree/shrub riparian communities and provide vegetative composition and structural diversity necessary to support aquatic furbearers (beaver, muskrat) waterfowl (cavity nesters), and possibly bobcats in winter. The open-timbered south and southeast facing slopes north of Vermilion Bay provides late winter and spring range for deer and elk.

Recommended Management. The Vermilion Bay bottom lands should be managed and possibly enhanced for the continued maintenance of a quality riparian area. Due to the possibility of conflicts with future recreation and mining, the long-term management plan should address these uses. In the case of mining, proper reclamation should be ensured.

To enhance waterfowl use of the bay area, nest boxes could be placed along the shoreline and/or islands created in the upper bay. The management plan also should include enhancement or maintenance of brood-rearing habitat.

The 80-acre tract (approximately) to the north of Vermilion Bay should be managed or enhanced for ungulate late-winter and spring range. This could be accomplished by managing the overstory canopy and understory vegetation through prescribed timber harvest and burning to provide the desired vegetative structures and species compositions. The long-term management plan should include a cooperative management agreement with the Kootenai National Forest for compatible management on lands adjacent to WWP lands and necessary treatment schedules.

Species Benefitted. A long-term wildlife management plan for the Vermilion Bay riparian areas would benefit aquatic furbearers, waterfowl, bobcats, and black bear as well as a number of non-target and non-game species known to utilize riparian habitats. Management of the upland areas for ungulates would benefit white-tailed deer, mule deer, elk, mountain lion, black bear and terrestrial furbearers. Mountain grouse would benefit from management of both upland and riparian zones. Full credit would be given for the acreage included in a long-term management plan for these species (groups) benefitted.

4) Copper Point

Description. The Copper Point area contains approximately 120 - 320 acres of mixed conifer forest and upland grassland. These habitats provided white-tailed deer winter range as well as mule deer winter and spring range. The upland habitats also are suitable for use by black bear, mountain grouse and terrestrial furbearers. This area, which offers a scenic view of and access to Noxon Rapids Reservoir, is currently subdivided and potentially could be the location of many more homesites, recreational developments and associated facilities. In addition, private land subject to subdivision lies between WWP land and Kootenai National Forest Land to the north.

Management Recommendations. The Copper Point area should be managed as a wildlife area with primary emphasis on providing quality white-tailed deer winter range. This management direction would also provide quality habitat for many other species - i.e. spring range for black bear, year-round habitat for mountain grouse, terrestrial furbearers. To maximize the benefits to wildlife, any future subdivision development should be limited. In addition, conservation easements on lands adjacent to WWP lands, particularly to the north, would be advisable to preserve wildlife habitat integrity.

Other management objectives should include the protection and maintenance of large diameter trees and snags for bald eagle and osprey roost or nest sites. Specific tracts could also be enhanced for ruffed grouse by increasing birch or aspen cover.

Species Benefitted. White-tailed deer, mule deer, mountain lion, ruffed grouse, black bear, bald eagle and terrestrial furbearers would be benefitted by the development of a long-term management plan. Acre-for-acre credit would be given to those species for the habitats fully protected by a conservation easement or managed/enhanced in a long-term wildlife management plan.

5) Tuscor Creek Flats

Description. This tract contains approximately 750 - 985 acres of mixed upland habitats adjacent to the reservoir in addition to a small wetland area (20 acres). The majority of the area is comprised of mixed conifer forest with an interspersion of upland and wet meadows. The upland habitats provide the cover and forage to sustain ruffed grouse, terrestrial furbearers and black bear. Additionally, the area provides winter range for white-tailed deer and spring range for elk. A small wetland area (T24N,R32W,Sec.10) may provide nesting and brood-rearing habitat for a variety of waterfowl species. Tuscor Bay may also support waterfowl and aquatic furbearers.

Tuscor Flats and the adjacent lands are currently utilized for livestock grazing. Signs designating WWP lands closed to trespass were observed during a field examination.

Management Recommendations. The size of the Tuscor Flats area combined with the diversity of habitats is conducive to the establishment of a habitat management plan to provide long-term benefits to the wildlife community. The management plan should focus on providing year-round habitat for the terrestrial target species, (white-tailed deer, black bear, terrestrial furbearers, ruffed grouse) with special emphasis on white-tailed deer winter range. The use of controlled grazing, managed timber harvest, prescribed burning and hardwood planting are some of the techniques that could be utilized to obtain the desired results. Additionally, enhancement recommendations for the small wetland and Tuscor Bay (i.e. grazing controls, maintenance of water levels, construction of nesting and/or loafing structures, etc.) should be included. A small tract of U.S. Forest Service land is located on the eastern edge of this area and could be included in the long-term management plan. Most of Tuscor Flats is suitable for subdivision; however, any future subdivision would be in conflict with the desired management for the wildlife resource. Because Tuscor Flats is separated from Kootenai National Forest land to the south and east by other private lands, the acquisition of conservation easements on the private lands should be considered. This would help maintain habitat integrity for the entire management area.

Species Benefitted. A long-term management plan for the Tuscor Creek flats would primarily benefit white-tailed deer, and other terrestrial species (ruffed grouse, black bears, furbearers). Credits would be given on an acre-for-acre basis to these species for habitats included in a long-term wildlife plan or conservation easement. Mountain lion credits would result from accrued benefits to big game species.

6) Blacktail Creek

Description. This property contains approximately 400 - 675 acres of mixed conifer forest and upland shrub habitat. Both this property and the adjacent Kootenai National Forest lands provide important big game winter range as well as year-round habitat for the terrestrial target species. The U.S. Forest Service has burned some of the adjacent habitats to stimulate their vegetative production and increase their importance to wintering big game animals.

Two islands and the shoreline of this property provide good waterfowl habitat. Bald eagles and osprey may also use the shoreline for perching and/or nesting.

Management Recommendations. To provide the greatest benefit to big game species, a cooperative management plan should be established with the Kootenai National Forest and include the WWP lands and adjacent U.S. Forest Service lands. This will provide the maximum long-term benefits to the wildlife resource. The management plan should focus on the maintenance/enhancement of the area for big game winter range. To accomplish the management objectives, techniques such as prescribed fires should be utilized to put the existing vegetation in the desired type and condition.

The shoreline and islands could be managed and enhanced for waterfowl by the creation of nesting areas (platforms, nest boxes) and brood-rearing habitat. Shoreline snags and large diameter trees should be protected for use by bald eagles and osprey.

Appropriate repeated treatment and maintenance requirements should be described in the management plan. Portions of the tract may provide suitable sites for housing or recreational developments; however, any future land uses could be in conflict with the desired management for the wildlife resource. Control of such uses also should be included in the management plan.

Species Benefitted. Long-term management of the Blacktail area for wildlife will benefit white-tailed deer, mule deer, elk, mountain lion, waterfowl, bald eagle and osprey. Mitigation credit will be given to these species for those acreages contained in a long-term management plan.

7) Hereford and Noxon Siding Sloughs

Description. The Hereford Slough area consists of 500 - 715 acres associated with a series of ponds and sloughs which are remnants of a historical river channel. A variety of upland (mixed conifer and grassland) and riparian/wetland (deciduous tree, deciduous shrub, sub-irrigated meadow and slough) habitats are found throughout this tract. This mosaic provides the habitat requirements for a diversity of wildlife species, including the majority of the target species. A large portion of the area has been altered by private residences and commercial developments and is not suitable for wildlife management. The status of the entire tract could not be determined from the Sanders County records; however, it appears that WWP land adjacent to a backwater slough (Section 14) is undeveloped and potentially suited for long-term habitat management/enhancement for waterfowl, bald eagle osprey and aquatic furbearers.

Noxon Siding Slough lies just north of Hereford Slough. This property (10-20 acres) contains high quality wetlands, open water, and riparian habitat types. The WWP ownership appears to be limited to the shoreline; the remainder of the tract is privately owned. The slough supports waterfowl and aquatic furbearers.

Management Recommendations. Both the backwater area of Hereford Slough (Section 14) and Noxon Siding Slough should be protected and managed for waterfowl, aquatic furbearers, osprey, and bald eagles. For waterfowl, the sloughs provide excellent brood-rearing habitat; although nesting habitat may be limited. Nesting habitat improvements (e.g. islands, nest boxes, platforms) could be provided to increase nesting potential. The habitat management plan should provide for the required maintenance/ enhancement schedules over the long-term. The extent of current subdivision development should be determined prior to making management recommendations for the remainder of the WWP lands. Future subdivision and other disturbing land uses should be limited to the areas already impacted.

Species Benefitted. The recommended management for the two slough areas would primarily benefit waterfowl and aquatic furbearers. Full credit would be applied to those wetlands and adjacent lands which are incorporated into a long-term wildlife management plan. White-tailed deer benefits would also accrue from limited subdivision activity.

8) Noxon Islands and Peninsula

Description. There are approximately 60 - 125 acres of riparian and upland habitats contained on the large Noxon peninsula and several associated small islands. Deciduous tree/shrub riparian vegetation types are interspersed with upland grass and shrubs providing suitable waterfowl nesting, brood-rearing and loafing habitat. Aquatic furbearers also use the islands, bay and peninsula. Due to the proximity of the town of Noxon, many of the larger wildlife species are discouraged from using the area. Recreational use of the peninsula is extensive.

Management Recommendations. The long-term habitat management of the area should focus on providing benefits to the waterfowl and furbearer populations. The large peninsula should be cut off and/or isolated from the mainland to restrict human and predator disturbances. Efforts also should include island construction and stabilization. Goose nesting structures could be built. Additionally, at least a portion of the deciduous tree/ shrub riparian habitat should be converted to a grass meadow which would provide better nesting and loafing habitat for waterfowl and grazing habitat for Canada geese. The management of future recreation will also have to be addressed. Because excessive recreational use, especially during the nesting season, would conflict with primary management objectives, a seasonal recreation closure should be considered part of a management plan.

Species Benefitted. Enhancement and management of the Noxon peninsula and islands would benefit waterfowl and aquatic furbearers. Benefits would be credited on an acre-for-acre basis to these species groups for the habitats incorporated into a long-term management plan.

9) Administrative Site

Description. A tract of approximately 725 - 950 acres adjacent to the Noxon Rapids Dam is maintained as an Administration Site by WWP. This area contains the dam, access roads, railroad right-of-way, gravel pits, housing development, and administration buildings. The remainder of the area is primarily mixed conifer forest and supports many of the target wildlife species.

The large amount of human activity within the tract makes this area less conducive to long-term mitigation than some of the other large tracts. However, there is a fairly large portion (150 acres) of the tract near Stevens Bay and along the Clark Fork River that could potentially be managed for wildlife benefits.

Management Recommendations. The Administrative Site should be managed to maintain a mixed conifer forest with a diversity of deciduous shrubs and trees. Additionally, a plan should be developed to control the amount of human disturbance throughout the tract. With proper management of human access, disturbance and recreation, a portion of the area can provide long-term mitigation benefits to the terrestrial target species.

Specific attention should be placed on the Stevens Bay area and the property along the river below the dam. Stevens Bay could be protected and managed for waterfowl and aquatic furbearers. Large diameter trees and snags should be maintained for eagle/osprey use. A management agreement for the adjacent Kootenai National Forest land should also be included. The forested area along the river below the dam also should be protected and managed for eagle use during the fall and winter. Access should be controlled during these critical times of year.

Species Benefitted. The principal species benefitted by management of the Administrative Site include waterfowl, aquatic furbearers, bald eagle, osprey and many non-target species. Credit on an acre-for-acre basis would be given to these species for those tracts included in a management plan.

10) Other WWP Lands

Description. The remaining WWP lands primarily consist of strip lands and a few medium sized tracts located along the reservoirs borders. Habitat characteristics and land uses of these tracts vary considerably. Many of the lands surround backwater bays an contain waterfowl, aquatic furbearer and bald eagle/osprey habitat. A few areas contain an abandoned railroad grade which has diked a portion of the reservoir. Other lands are characterized by steep slopes and may primarily benefit bald eagle/osprey and non-target species.

Management Recommendations. For those properties affected by the old railroad grade, water control structures could be placed in the dikes to stabilize and/or regulate water levels. A similar approach could be applied to backwater sloughs not presently isolated from the reservoir. An assessment of substrate permeability should be undertaken first. It may be necessary to seal the bottom of the backwater areas to prevent dewatering when the reservoir levels are dropped. Additional investigation into the potential benefits and detriments of this alternative is recommended.

Water level maintenance would allow for the establishment and perpetuation of diverse stands of aquatic vegetation (both emergent and submergent) in addition to providing secure nesting and brood-rearing areas. Within these bay areas, islands and nesting structures could be added to enhance waterfowl production. Brood-rearing areas could be developed through appropriate vegetation manipulations. Additional secure nesting sites for waterfowl may be enhanced by creating islands from peninsulas or creating several smaller islands from one large island.

Future subdivision development, recreational use, and other human disturbances should be managed to limit additional impacts to waterfowl using the area.

Species Benefitted. Bald eagle, osprey, waterfowl, aquatic furbearers and non-target species can potentially be benefitted through the protection and enhancement of border lands along the 2 reservoirs. Credits would be applied on an acre-for-acre basis, but qualifying lands would depend on the quality and quantity of shoreline habitats protected.

11) Aquatic Furbearer Project

Description. Both beaver and river otter habitats of the Clark Fork river were significantly impacted due to reservoir construction. However, both species are currently using the reservoirs to a degree. In 1983, one river otter was sighted in the Martin Bay area of Noxon Reservoir (R. Woodworth 1983, pers. commun.). River otters are still found upstream of the reservoirs in the Clark Fork and Thompson River (J. Diebert 1983, pers. commun.). Evidence of beaver colonies also exists along the reservoir (M. Wood 1984, pers. commun.). The extent of both river otter and beaver use (as well as of other aquatic furbearers such as mink and muskrat) is not known. The possibility exists that, once sufficient information on aquatic furbearers use of the reservoirs is obtained, enhancement opportunities can be identified.

Management Recommendations. In conjunction with the previously described land management projects, it is recommended that a project identifying aquatic furbearer habitat use, requirements and population status of Noxon Rapids and Cabinet Gorge reservoirs (and associated drainages) be implemented. This project should focus on: 1) surveying the reservoir basins to determine population abundance and characteristics, and 2) inventorying potential as well as used habitat types. From these data, management recommendations on reservoir operation, habitat protection and/or enhancement and for re-introduction potential can be made. In this way, mitigation strategies for these aquatic furbearer species can be developed and implemented on these reservoirs and perhaps, elsewhere.

Species Benefitted. The recommended project is designed primarily to benefit river otter and beaver although other species (groups) such as mink, muskrat, and waterfowl could also accrue benefits.

B. STATE OF MONTANA SCHOOL TRUST LANDS

Description. Several tracts of school trust lands managed by Montana Department of State Lands are located within the lower Clark Fork River valley, and may be suitable for management/enhancement for long-term mitigation. Two tracts in particular have been identified as having the potential to be managed for the long-term benefit to the target species.

One tract, consisting of approximately 200 acres located at the mouth of Beaver Creek (T24N,R31W,Sec.26), provides white-tailed deer winter range. This area also contains a large bay suitable for waterfowl habitat enhancement. Currently the area is leased for grazing and hay production.

A second state section (T26N,R32W,Sec.36) located along McKay Creek contains low gradient stream bottom and associated deciduous riparian and mixed conifer habitats. This tract was selectively logged in the past; however, a diverse old growth forest is still present throughout the area. This type provides the habitat requirements for elk, mule deer, white-tailed deer, mountain lion, bear, terrestrial furbearers, and many non-target species. Numerous beaver dams, with associated ponds, are located along the creek throughout the section, indicating the value to aquatic furbearers.

Two other 640-acre privately owned sections are found adjacent to the state section and also include high quality riparian and upland habitats. Kootenai National Forest lands are contiguous with these sections.

Management Recommendations. For these school trust lands, it may be feasible to develop long-term cooperative management agreements to protect and maintain quality riparian and forested habitats. Specifically, the plan for Beaver Creek should include the maintenance of quality white-tailed deer winter range. The McKay Creek agreement should include the adjacent privately owned sections and address the protection of the riparian zone and old growth conifer with sufficient regeneration to ensure perpetuation of the type. These management directions would provide habitat requirements for many wildlife species, including many of the target species. Because school trust lands managed by the Department of State Lands provide revenue to the school trust fund, the proposed management may reduce the long-term revenue produced by the area. Therefore, appropriate revenue reimbursement may be required by the cooperative management agreement. To include the other privately owned lands adjacent to the McKay Creek school trust section in a management agreement, acquisition of conservation easements also may be necessary.

Species Benefitted. Long-term management of these School Trust Lands and adjacent properties would benefit many target species including white-tailed deer, mule deer, mountain lion,

aquatic and terrestrial furbearers, ruffed grouse, black bear, and grizzly bear. Credits would be given on an acre-for-acre basis by species for the habitats included in a long-term management plan.

C. OTHER PRIVATE LANDS

Description. Additional wildlife mitigation could be achieved on several tracts of private land by obtaining conservation easements or by actual fee-title acquisition. Specific private tracts would be identified and selected on the basis of species losses not completely mitigated by management agreements on WWP or School Trust Lands (e.g. grizzly bear, black bear, white-tailed deer).

The Bull River Valley, in particular, would be an ideal area for fee-title or conservation easement acquisition. This valley contains priority lands for trade or acquisition identified by the Kootenai National Forest. Diverse wildlife communities, including white-tailed deer, mule deer, elk, moose, black bear, grizzly bear, terrestrial and aquatic furbearers and several species of waterfowl inhabit the Bull River valley. Bald eagles migrate through the area and are known to winter on a nest in the vicinity. The Bull River valley is an important link between two wildlife units - the Cabinet Wilderness and the West Cabinets. The integrity of the wildlife habitat (the U.S. Forest Service estimates there are approximately 3,000 acres of private lands below Bull Lake) is seriously threatened by ongoing sales of small acreages for homesites and ranchettes. In particular, ASARCO owns approximately 700 acres of prime wetlands habitat including wet meadows, springs, and beaver ponds; this area would be an excellent candidate for obtaining either a conservation easement or fee-title.

Other lands ideal for acquisition or conservation easements include private lands located on Rock Creek (northeast of Noxon Dam) and McKay Creek (as previously mentioned).

Management Recommendations. Acquisition of lands along the Bull River should be coordinated with the Kootenai National Forest and should focus on protecting large, high-wildlife value tracts versus acquiring small scattered tracts. Acquisition of other lands should be similarly coordinated with federal and state agencies. Where fee-title acquisition is not feasible, conservation easements should be pursued.

Species Benefitted. Acquisition of these private lands would benefit all the target species as well as many non-target species. Credit would be determined on an acre-for-acre basis for species losses because of the long-term protection from detrimental land uses provided by easements or acquisitions.

D. U.S. FOREST SERVICE LANDS

Description. The Kootenai and Lolo National Forests manage a portion of their lands along the two reservoirs for big game winter range. The Forests have identified parts of these ranges for winter range enhancement (Table 6). Most of these winter ranges occupy southerly aspects. Due to fire suppression, these areas are undergoing plant succession to conifer forest causing a reduction in available winter forage vegetation (i.e. shrubs, grasses).

Management Recommendations. The Forest Service has proposed to treat several winter range areas through prescribed burning. These treatments would be designed to increase the value of the areas for wintering elk, mule deer and white-tailed deer. Burning would induce the resprouting of the shrubs creating more vigorous plants with increased leader production, and remove the encroaching conifer within the shrubfield. Additionally, the U.S. Forest Service proposed to reduce the canopy cover in selected conifer stands. This management technique, when combined with prescribed fire, should provide the long-term stimulation of the understory vegetation (grasses and shrubs), the preferred big game winter and spring forage. Treated winter ranges should also provide spring and fall habitat for black and grizzly bears.

To undertake an enhancement program, a cooperative management plan, including WWP, the Lolo and Kootenai National Forest and the Montana Department to Fish, Wildlife and Parks, would have to be developed. This plan would need to address the unit to be managed, the prescribed treatment and suitable adjacent lands. It also should guarantee that once an area is treated, the adjacent lands would be managed in a fashion consistent with the desired management objective. This should prevent detrimental actions, such as clear cutting, road construction, etc., adjacent to the treatment units.

Species Benefitted. Proper winter range enhancement on National Forest lands would provide long-term mitigation primarily for elk, mule deer, mountain lion, black bear, and grizzly bear. Credit for big game species would be applied using the carrying capacity enhancement objective described in the Methods Section.

Table 6. Potential locations and acres of winter ranges suitable for enhancement in the Clark Fork Valley (C. Brooks 1983, pers. commun.).

Location	Acres
Green Mountain	800
Marten Creek	2,600
Pilgrim Creek	2,000
Beaver Creek [a]	1,300
Whitepine Creek [a]	2,000
Trout Creek	2,700
Blue Creek	1,600
Stevens Creek	200
Elk Creek	900
Water Hill	700
Upper Vermilion Creek	900
Little Beaver Creek	700
Total Acres	16,400

[a] Winter range enhancement in these drainages is considered to be highest priority for elk management (S. Riley 1984, pers. commun.)

IV. SUMMARY OF THE MITIGATION PLAN

Mitigation projects for wildlife species impacted by the Noxon Rapids and Cabinet Gorge hydroelectric projects are recommended. These projects were based on alternatives discussed during the last coordination meeting (May 1984) and were prioritized according to landownership, benefits to wildlife species, and implementation potential. Due to the lack of specific information regarding the status of WWP lands adjacent to the reservoir, it was necessary to develop general mitigation objectives instead of detailed project plans. The specific project plans and techniques will be described in wildlife management plans developed between WWP and the Montana Department of Fish, Wildlife and Parks, or other appropriate agency.

First priority projects encompass the development of long-term wildlife management plans for WWP lands adjacent to the two reservoirs. General objectives for all WWP lands include alternatives designed to protect or enhance existing wildlife habitat. It is also suggested that WWP evaluate the current status of beaver and river otter populations occupying the reservoirs and implement indicated management. For nine specific large tracts of WWP lands, general management objectives are described. These nine areas include tracts of at least 100 acres with existing wildlife habitat or acreage with enhancement potential. The objectives are directed towards management of the target species as well as many non-target species. Benefits to white-tailed deer, elk, mule deer, bears, aquatic and terrestrial furbearers, waterfowl, bald eagles and osprey are identified. The inclusion of National Forest lands and private lands adjacent to WWP lands into the long-term agreements is also considered a first priority.

Second priority projects include the protection/enhancement of wildlife habitat on State owned or privately owned lands. Long-term wildlife management agreements would be developed with Montana School Trust lands and may involve reimbursement of revenues lost to the State. Beaver Creek and McKay Creek are two areas identified which contain School Trust lands with prime wildlife habitats. Obtaining conservation easements or fee-title on privately-owned lands supporting prime wildlife habitat is also suggested. Acreage in the Bull River valley has been targeted by the Forest Service for acquisition or tradelands to protect prime wildlife habitat threatened by commercial development and maintain an important corridor between two major wildlife units. Coordination with the Forest Service is suggested. Other privately-owned lands for which wildlife habitat protection and/or enhancement is recommended include 2 sections on McKay Creek adjacent to the School Trust lands. Mitigation for all target species and many non-target species would be achieved if long-term management plans were developed for these lands.

Third priority projects include the enhancement of big game winter ranges located on Kootenai National Forest lands. Emphasis

should be placed on those areas adjacent to WWP lands under long-term wildlife management thereby increasing the effective management unit. A cooperative agreement with WWP and the Forest Service may involve financial support of habitat treatments. Areas to be treated would be agreed upon by WWP, the U.S. Forest Service, and Montana Department of Fish, Wildlife and Parks. Ungulate species, mountain lions, and bears would be primary species benefitted. A summary of the potential projects, land ownerships, and species benefits are shown in Table 7.

Table 7. Summary of recommended wildlife mitigation projects for the Noxon Rapids and Cabinet Gorge hydroelectric facilities.

Priority	Project	Objectives	Locations	Potential Acres	Species Benefitted
1	Management Agreements on WWP lands (and adjacent USFS lands) and aquatic furbearer project	To protect/maintain important wildlife habitats To protect/enhance waterfowl habitat To manage compatible land uses To determine status of aquatic furbearers on 2 reservoirs	Lands adjacent to two reservoirs	4500 - 7100	White-tailed deer, mule deer, elk, black bear, mountain lion, terrestrial furbearers, aquatic furbearers, waterfowl, ruffed grouse, bald eagle, osprey
2	Management Agreements on School Trust Lands	To protect important riparian habitats	Beaver Creek, McKay Creek, Rock Creek	Undetermined	Black bear, grizzly bear, aquatic furbearers, terrestrial furbearers, white-tailed deer
2	Conservation Easements on private lands	To protect important riparian habitats	Bull River McKay Creek	Undetermined	Black bear, grizzly bear, aquatic furbearers, white-tailed deer
3	Enhancement of big game winter ranges	To treat winter ranges via various enhancement techniques	Kootenai National Forest lands adjacent to reservoirs containing winter ranges	Undetermined	Elk, mule deer, black bear, grizzly bear

V. LITERATURE CITED

Wood M. and A. Olsen. 1984. Wildlife Impact Assessment and Mitigation Summary. Montana Hydroelectric Projects Volume IIB - Cabinet Gorge and Noxon Dams. MT. Dep. Fish, Wildlife and Parks. Rept. in cooperation with Bonneville Power Adm. Contract No. 83-464. 71 pps and appendices.

APPENDIX A

May 31, 1983

MONTANA DEPARTMENT OF FISH, WILDLIFE, AND PARKS

RECEIVED
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REGION 1

MITIGATION GUIDELINES

When mitigation as provided by law is proposed for development projects, the Montana Department of Fish, Wildlife, and Parks shall request funding from the developer, or the appropriate agency, to conduct those studies necessary to determine impacts of the development on fish and wildlife and their habitat and to develop a project specific mitigation plan.

WILDLIFE SECTION

The principle objective of the mitigation plan shall be to mitigate within the project area impacts to wildlife and to compensate for animal losses attributable to the development project. The plan shall identify measures to maintain populations of affected species. The plan shall prescribe appropriate measures to document the implementation of the mitigation package, to monitor wildlife response to those measures, and to document the sufficiency of mitigation.

The Montana Department of Fish, Wildlife, and Parks shall request funding from the developer, or the appropriate agency, to implement, monitor, and document the mitigation measures prescribed in the mitigation plan.

Selection of mitigation measures for terrestrial species shall be determined by the following criteria:

A. The mitigation objective shall be to replace, on an animal for animal basis, animal losses attributable to the development project and to ensure the replacement of lost animal production into the future. This objective may be modified according to this priority:

   1. To replace, on an animal for animal basis, animal losses specifically attributable to the development project.

   2. To replace, on an animal for animal basis, some of the animal losses and an appropriate equivalent of animals of other species.

   3. To replace, on an animal for animal basis, an appropriate equivalent of other species.

B. Mitigation measures:

   1. The highest priority shall be assigned to the development and implementation of measures to enhance wildlife habitat on land owned by other agencies, corporations, or individuals, without the Department acquiring management authority to those lands.

      Implementation of enhancement measures shall be dependent upon cooperative agreements with the appropriate land management agencies and a land allocation compatible with mitigation objectives. The Department shall request funding for implementation of those measures, including operation and maintenance for

the life of the development project, and, when appropriate, research and development of enhancement measures.

2. If the Department cannot negotiate agreements to implement enhancement measures on lands in other ownership within a reasonable time, then the Department shall attempt to acquire management authority over lands identified in the mitigation plan. Acquisition of management authority by conservation easement, when applicable, shall have priority over acquisition by fee title from willing sellers. Lands to be acquired shall be determined by priorities established by this policy, while procedures for acquisition shall be consistent with principles outlined in the Department's statewide habitat acquisition policy. The Department shall develop a management plan for acquired lands. The Department shall request the developer, or the appropriate agency, to acquire the lands and to provide funding for development of the management plan, research and development appropriate to the management of those lands, and ongoing operation and maintenance of those lands.

3. On new projects, the Department shall request that mitigation lands be acquired at the same time as other project lands and be included in basic project costs.

C. The location of mitigation projects shall be consistent with the mitigation objectives, and be determined according to the following priority:

1. Immediate vicinity of the development project or within the annaul range of the species affected.

2. Within the county (or within a 50-mile radius) of the development project.

3. Within the corresponding Department of Fish, Wildlife, and Parks administrative region.

4. Within Montana.

D. Mitigation measures shall feature those species identified in Section A-1, 2 or 3, consistent with the mitigation objective. Those species shall have priority at all projects within location priorities Section C-1, 2, and 3. Thereafter, features species shall be determined by SCORP.

Decisions regarding acceptance or rejection of proposed mitigation recommendations shall be made with full public knowledge, input, and review.

Approved by:_____

Date:_____

APPENDIX B

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WILDLIFE DIVISION

THE WASHINGTON WATER POWER COMPANY

P O BOX 3727 • SPOKANE WASHINGTON 99220 • (509) 489

FRED A. SHIOSAKI
Manager
Environmental Affairs

March 14, 1985

Mr. John G. Mundinger
Montana Department of Fish,
Wildlife, and Parks
1420 East 6th Avenue
Helena, MT 59620

Re: "Wildlife and Wildlife Habitat Mitigation Plan for the Noxon Rapids and Cabinet Gorge Hydroelectric Projects. January, 1985."

Dear Mr. Mundinger:

Thank you for your February 20, 1985 letter transmitting a review copy of the above-referenced document and requesting comments from The Washington Water Power Company (WWP). WWP has no comments concerning the technical merits of wildlife management alternatives presented in the document. However, WWP is concerned with other related issues. For example, several issues such as the: 1) utility of previous retroactive wildlife loss assessments; 2) appropriateness of each measure with respect to other public interests; and 3) degree of responsibility each party should assume in implementing any wildlife management measures agreed upon, have yet to be resolved. These issues may best be addressed separate and apart from the technical planning document.

The status of settlement agreements and other pertinent legal provisions must also be clarified. In this regard, we are concerned with the characterization of the 1958 settlement agreement being "primarily...for expected fisheries impacts." While the disposition of compensation provided under the agreement was at the State's discretion, the settlement clearly responds to Articles 32 and 34 of the federal license for the Noxon Rapids project. Considering this, the settlement is more properly characterized as a mutually agreed response to the fish and wildlife requirements of the project license.

As noted in previous comments related to this matter, WWP is prepared to discuss present-day environmental concerns and means to further the environmental values of the Noxon Rapids and Cabinet Gorge projects, consistent with their licensed purpose.

Sincerely,

Fred A. Shiosaki

Fred A. Shiosaki

RDW:kmc
Enc.

SERVING THE INLAND EMPIRE OF WASHINGTON AND IDAHO

Montana Department of Fish, Wildlife & Parks

Helena, MT 59620
March 13, 1985

RECEIVED
MAR 19 1985

Mr. Jim Meyer
Bonneville Power Administration PJ5
P. O. Box 3621
Portland, OR 97208

Dear Mr. Meyer:

The Montana Department of Fish, Wildlife and Parks has completed both the wildlife impact assessments and mitigation plan for the Cabinet Gorge and Noxon Rapids hydroelectric projects. The mitigation plan consists of four recommended wildlife projects. The priority project entails the development of wildlife management plans and agreements for Washington Water Power's lands surrounding the two reservoirs. Because the exact benefits of this project are not known, three additional projects are proposed which would satisfy any remaining mitigation for the estimated wildlife losses.

The Cabinet Gorge and Noxon Rapids mitigation plan was developed to meet the goals and objectives outlined in the Northwest Power Planning Council's Fish and Wildlife Program. In this process, we have attempted to recommend projects which are sensitive to current landownership patterns near two reservoirs as well as to wildlife needs. We believe this plan offers a flexible and innovative approach to wildlife mitigation. In addition, most of the proposed projects are considerably more cost-effective than acquisition alternatives.

I support adoption of the Cabinet Gorge and Noxon Rapids mitigation plan and look forward to working with Washington Water Power to implement these projects. I also commit the Montana Department of Fish, Wildlife and Parks to fully cooperate with the implementation of this plan.

Sincerely,

James W. Flynn
Director

kc

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Ecological Services
Federal Building, Room 3035
316 North 26th Street
Billings, Montana 59101-1396

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NW Mt. Fish and Wildlife Ctr.
MAR 15 1985

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FC	
FW	

IN REPLY REFER TO:
ES

March 13, 1985

Mr. John Mundinger
Montana Department of Fish, Wildlife & Parks
1420 East Sixth Ave.
Helena, Montana 59620

Dear Mr. Mundinger:

We have reviewed the document entitled, "Wildlife and Wildlife Habitat Mitigation Plan for the Noxon Rapids and Cabinet Gorge Hydroelectric Projects," which was transmitted to Larry Lockard of my office. We endorse the mitigation plan as being the most feasible method for obtaining any real benefits to wildlife as compensation for the construction and operation of the subject reservoirs. Although acreages which would completely offset documented losses are not specifically identified, enough alternative proposals appear to be presented to allow for implementation of full mitigation.

As your document states, the Northwest Power Act does not clearly identify which parties are responsible for funding and implementing mitigation plans for non-federal hydroelectric projects such as these. Hopefully, this issue will be resolved in an expeditious manner. In any case, the Fish & Wildlife Service will continue to cooperate with your Department and other responsible entities in the effort to implement the proposed plan.

The area covered in the subject document includes important grizzly bear and bald eagle habitat. We would appreciate coordination with our Endangered Species Office in Helena when specific mitigation plans are being implemented for these species. In addition, further development and implementation of grizzly bear plans should be coordinated with the IGBC and Cabinet/Yaak Grizzly Committee, and of bald eagle plans with the Montana Bald Eagle Working Group.

We appreciate the opportunity to comment on the mitigation plan.

Sincerely,

John G. Wood
Field Supervisor
Ecological Services

cc: Regional Director, USFWS, Denver, CO (HR)
Field Supervisor, USFWS, Helena, MT (SE)
Larry Lockard, USFWS, Kalispell, MT (ES)

9/1.51

United States Department of Agriculture
Forest Service
Region 1
Federal Building
P.O. Box 7669
Missoula, MT 59807

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MAR 20 1985
WILDLIFE DIVISION

Reply to: 2670

Date: March 18, 1985

Mr. John Mundinger
Montana Department of Fish, Wildlife and Parks
1420 East Sixth Avenue
Helena, MT 59620

Dear John:

We have received your recommended wildlife mitigation plan for the Cabinet Gorge and Noxon Rapids hydroelectric projects. It appears to properly address our areas of interest and concern. We encourage you to continue your efforts to involve and coordinate with the two National Forests involved. Coordination of the mitigation plan with the Forests' ongoing long-range planning efforts will be critical.

Thank you for the opportunity to review and comment on the plan.

Sincerely,

FOR BARBARA HOLDER
Director of Wildlife and Fisheries

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Wildlife and
wildlife habitat
mitigation plan
for the Noxon
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